2. Preparation

2.1 Hardware Requirement

To achieve the optimal performance when AhsayOBM is running on your machine, refer to the following article for the list of hardware requirements.
FAQ: Ahsay Hardware Requirement List (HRL) for version 8.1 or above

2.2 Software Requirement

Make sure the operating system where you have the Office 365 installed is compatible with the AhsayOBM. Refer to the following article for the list of compatible operating systems and application versions.
FAQ: Ahsay Software Compatibility List (SCL) for version 8.1 or above

2.3 AhsayOBM Installation

For agent-based backup and restore, make sure that the latest version of AhsayOBM is installed on your computer with Internet access for connection to your Office 365 account.

User should also stay up-to-date when newer version of AhsayOBM is released. To get our latest product and company news through email, please subscribe to our mailing list.

2.4 Antivirus Exclusion Requirement

To optimize performance of AhsayOBM on Windows, and to avoid conflict with your antivirus software, refer to the following Wiki article the list of processes and directory paths that should be added to all antivirus software white-list / exclusion list:
FAQ: Suggestion on antivirus exclusions to improve performance of Ahsay software on Windows

2.5 Upgrade VMware Tools Requirement

To avoid unexpected java crash, if the Windows machine is a guest VM hosted on a VMware Host then it is highly recommended that the VMware tools version installed on the guest VM must be 10.0.5 or above.

Below is the warning message that will be displayed if the version of the VMware Tools is less than 10.0.5.

Warning ✕
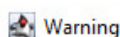
⚠️ Please upgrade VMware Tools to 10.3.5 or higher to avoid unexpected java crash. Current VMware Tools version: 10.0.0.50046.

OK

For more information about the upgrade of VMware Tools, refer to this article.

2.6 AhsayOBM License Requirements

AhsayOBM licenses are calculated on a per device basis:

> i. To backup users with one (1) backup client computer
>
> Example: If one AhsayOBM is installed then, one AhsayOBM license is required.
>
> ii. To backup users with multiple backup client computers, the number of AhsayOBM licenses required is equal to the number of devices.
>
> Example: If there are ten (10) users to be backed-up with three (3) backup client computers, then 3 AhsayOBM licenses are required

2.7 Add-on Module Requirement

Make sure that the Office 365 Backup feature has been enabled as an add-on module in your AhsayOBM user account and there is enough Office 365 Backup license quota to cover the backup of your users.

Please contact your backup service provider for more details. Below is a sample screen shot of an AhsayOBM User with an add-on module of Office 365 with 20 licenses.

The licenses for the Office 365 module are calculated by the number of unique Office 365 accounts. If same Office 365 account is backed up on multiple backup sets with an OBM user account would be counted a one Office 365 license.

If you are trying to backup SharePoint Sites under the Site Collections and/or files or folders under Public Folder, only one Office 365 license module is required.

However, if you are trying to backup Items from Outlook, Items from OneDrive, Personal Sites under Users, the Office 365 license count will be calculated based on the number of the user account selected.

For more detailed examples about the Office 365 license requirement and usage, refer to Appendix A: Example Scenarios for Office 365 License Requirement and Usage.

Access for AhsayCBS User Web Console

It is now possible to perform agentless backup and restore, which can be done via the AhsayCBS User Web Console without using the AhsayOBM client agent. In order to access the User Web Console, make sure you have Internet connection and a web browser installed on your computer or mobile device.

Please contact your backup service provider for more details.

Backup Quota Requirement

Make sure that your AhsayOBM user account has sufficient quota assigned to accommodate the storage of the Office 365 users for the new backup set and retention policy.

Please contact your backup service provider for more details.

Continuous Backup Module

The Continuous backup add-on module is required if would like to enable the continuous backup feature.

Please contact your backup service provider for more details.

Public Folder Backup

A licensed Exchange Administrator or a licensed user with Public Folder permission is required otherwise you will not be able to access the public folder to select items and for backup or restore.

Java Heap Size

An Office 365 backup set will require at least 2048MB of Java heap size.

To avoid any inconveniences and ensure smooth operation when performing Office 365 backup, it is highly recommended to allot extra memory.

Below is the table for the memory requirement:

Per OneDrive Account	100 MB

Per SharePoint Site Collection	150 MB

Note: The memory requirement is dependent on the number of OneDrive or SharePoint Site Collections selected for backup.

For more detailed examples about the Office 365 license requirement and usage, refer to Appendix B: Example Setting for Java Heap Size.

> The Java heap size to be configured should not exceed 2/3 of the RAM available, to allow sufficient resources for the operating system.

For more detailed information on how to change the Java heap size, please refer to this link: FAQ: How to modify the Java heap size setting of AhsayOBM?

2.8 Office 365 License Requirements

Office 365 Subscription Plan

The following subscription plans with Office 365 email services are supported to run backup and restore on AhsayOBM or AhsayCBS User Web Console.

Office 365 Business	Office 365 Business Essentials
Office 365 Business Premium	Office 365 Enterprise E1
Office 365 Enterprise E3	Office 365 Enterprise E4
Office 365 Enterprise E5	Office 365 Education

Office 365 Subscription Status

Make sure your Office 365 subscription with Microsoft is active in order to enjoy all privileges that come along with our backup services. If your account has expired, renew it with Microsoft as soon as possible so that you can continue enjoy the Office 365 backup services provided by Ahsay.

When your account is expired, depending on your role, certain access restrictions will be applied to your account. Refer to this URL for more details: Microsoft Office 365 Subscription Status

2.9 Office 365 Permission Requirements

Granting Permission to Accounts for Creating Backup Set

Before the Office 365 account administrator or other accounts can create a backup set, the administrator has to grant permission to the account(s) which are going to create backup set. The account must be a member of the following security groups:

- Discovery Management
- Public Folder Management

Follow the steps below to grant permission to user account.

i. Open https://outlook.office365.com/ecp

ii. Login to the **Office 365 admin center** as an account administrator.

Office 365

Work or school account

someone@example.com

••••••••

☐ Keep me signed in

Sign in   Back

Can't access your account?

iii. Select the permissions menu on the left, then double click on **Discovery Management** or **Public Folder Management** on the right. Exchange admin center setting

iv. You can now add users to this group. Click the + icon under the **Members** section.

v. Look for the username(s) of the account that you would like to add permission for, then click **add > OK** to add the corresponding user(s) to the permission group.

vi. Click **Save** to confirm and exit the setting.

Granting Permission for Application Impersonation & Mail Search

This permission allows users added under the **Members** section of the **Discovery Management** group (refer to the previous section for setup) to back up and/or restore user item(s) not only for their own account, but also the accounts of other users in the same **Members** section. To grant permission for this feature, you have to add the **Application Impersonation & Mail Search** role by following the steps below.

i. Open https://outlook.office365.com/ecp

ii. Login to the **Office 365 admin center** as an account administrator.

iii. Select the **permissions** menu on the left, then double click on **Discovery Management** on the right. Exchange admin center setting

iv. Click the **+** icon under the **Role** section.

v. Select the **ApplicationImpersonation&MailSearch** role, then click the **add** button. Click **OK** afterward.

vi. Click Save to confirm and exit the setting.

Granting Permission for SharePoint Global Admin

The Global Admin permission allow SharePoint account to list other account's Personal Site and OneDrive in the backup source tree. So before using AhsayOBM to create backup set, please ensure the SharePoint account has already owned the permission in order to apply AhsayOBM to back up and/or restore user item(s) not only for their own account, but also the accounts of other users.

i. Open https://outlook.office365.com/owa to sign in Office 365 as a global admin or SharePoint admin.

ii. Click in the upper-left and choose Admin to open the Office 365 admin center.

iii. In the left pane, choose Admin Centers > SharePoint.

iv. Check the box of the site collection you want to grant Global Admin and click Owners to choose Manage Administrators.

v. Add **Global Admin** in the **Site Collection Administrators** box.

vi. Click **OK** to confirm.

Restore Requirement

When restoring data of Office 365 user, the account which the data will be restored to requires valid license(s):

Requires Exchange License

Example: Exchange Online Plan and Office 365 E3 are required when restoring Outlook's / Public Folder's items.

Requires SharePoint License

Example: SharePoint Online Plan and Office 365 E3 are required when restoring OneDrive's / Personal Site's items.

2.10 Supported Services

See here for all the support services that Ahsay can backup.

2.11 Limitations

2.11.1 Ahsay Limitations

SharePoint

- Document Libraries, List Items and their default Column Types will be supported, excluding customized Apps and SharePoint App Store applications.
- Most of site lists will be supported, except for certain list types that will be skipped to restore due to API limitation, for example is Microfeed in Classic Team Site.
- Site logos will NOT be restored, it is suggested revisiting the site setting page and manually add the missing images if necessary.
- User-defined workflow templates will NOT be supported for backup and restore.
- Recycle Bin will NOT be supported for backup and restore.
- Most of Site level settings will NOT be restored, except for those essential to support the successful restore of the backup items e.g. Manage Site Feature / Site Collection Feature.
- Most of List level settings (including List view) will NOT be restored, except for those essential to support the successful restore of backup items, e.g. item checkout settings. Following restore, it is suggested revisiting the relevant settings if necessary. This may affect list column ordering and visibility after restore.
- Restoring External Data column is NOT supported, if external content type has been deleted via SharePoint Designer.
- Restoring of multiple Value of managed metadata column when the key name (column name) contains space is NOT supported.
- Restoring of list with local managed metadata column to alternate location is NOT supported.
- Restoring Newsfeed items in Modern Team Site will not publish the items to Homepage automatically, user will need to navigate to Site Content > Page Library> click on each individual news item and "Post" the news one by one manually.
  - Backup User (except for Global Administrator) may not have permission to back up the

site collection even if he/she can view it in the backup source tree. FOR EACH site collection, the user can backup it only if he/she is assigned as a site admin of that site collection.

- If the user is assigned as site admin of the root level site collection only, he/she is not automatically added as site admin of other site collection under that root level site collection (i.e. If user is to backup specific site collection under the root, he/she has to be added as site admin of that specific site collection under the root also).
- For site collection that can be viewed by user in the source tree which he/she is not yet assigned as a site administrator:
  - when user expand the node of that site collection, access denied error pop up will be given.
  - when user tick such site collection to backup, access denied error will be given in the backup log.

OneDrive

- Backup and restore of file share links will be supported for OneDrive and SharePoint Documents only, and only for restore to the same Office 365 organization.
- Backup and restore of all versions will be supported for OneDrive and SharePoint Documents only, except for ".aspx" files.

Outlook

- Online Archive Mailbox will NOT be supported for backup and restore.
- For Outlook mail item, after using restore to original location to overwrite a mail item (and hence id of the mail id is changed), then
  - In the backup source tree of the same backup set:
    - the original ticked item still use the old mail id to reference and becomes red item.
    - there is another item (with the latest mail id) created for that mail item
- User will need to dis-select the red item and tick the mail item again in the backup source tree in order to do the next backup properly. As per development team, the issue will not be handled as user's selected source should not be modified by system

Restore to Alternate location

- Only administrator account or user account with administrative authority can restore backup items to an alternate location.
- If you are trying to restore item(s) from one user to an alternate location user, AhsayOBM will restore the item(s) to their respective destination folder(s) with the same name of the original folder(s).

  Example: Item from Outlook of User-A will be restored to the Outlook of the alternate location User-B; Item from SharePoint of User-A will be restored to the SharePoint of the alternate location User-B.
- Restore of item(s) in public folder to an alternate location public folder is not supported.

  Example: Restore of item(s) in public folder from User-A to alternate location User-B is not supported.
- When restoring to alternate location, data type "Person or Group" will not be restored. Following restore, it is suggested revisiting the relevant settings if necessary. This also

affects "Assigned To" column values of some list templates (e.g. Tasks list), and "Target
Audience" column values of some list templates (e.g. Content and Structure Reports).

- If you are trying to restore item(s) from several users to an alternate location user,
AhsayOBM will restore the item(s) to their respective destination folder(s) in alternate
location user with the same name of the original folder(s).

Example: Item from Outlook of User-A and User-B will be restored to the Outlook of the
alternate location User-C.

Restore to Alternate office 365 account

If you are trying to restore item(s) from multiple office 365 user account to an alternate office 365
user account, AhsayOBM can only restore one office 365 user account at a time.

Restore to Alternate Organization

- Restoring of document library (including OneDrive) items 'Share Link to alternate
organization will trigger a warning message.
- Skip to restore People and groups and Site permissions to alternate origination.

Restore data to a destination user which has a different language

If you are trying to restore the item to a destination user which has a different language setting
than the original user, AhsayOBM will restore item(s) to their respective destination folder based
on the translation listed below.

For folders such as 'Calendar' or 'Notes', a new folder 'Calendar' or 'Notes' will be created.

For folders in OneDrive and SharePoint, a new folder will be created.

Restore existing documents in checked-out status

Restoring of existing documents in **checked out** status is supported only when the user who has
checked out the file is the same user who is performing the restore.

Backup source (English)	Action	Destination User with Chinese as default language settings
Inbox	Merge	收件箱
Outbox	Merge	寄件匣
Sent Items	Merge	寄件備份
Deleted Items	Merge	刪除的郵件
Drafts	Merge	草稿
Junk E-Mail	Merge	垃圾電郵
Calendar	Create new folder	Calendar
Notes	Create new folder	Notes
OneDrive Folder	Create new folder	OneDrive Folder
SharePoint Folder	Create new folder	SharePoint Folder

2.11.2 Microsoft Limitations

Exchange Online

For more detailed information on the limitations of Exchange Online, please refer to this Microsoft article, Exchange Online Limits. These are some of the limitations that will be discussed in the Exchange Online Limits article:

- Address book
- Mailbox storage
- Capacity alerts
- Mailbox folder
- Message
- Receiving and sending
- Retention
- Distribution group
- Journal, Transport, and Inbox rule
- Moderation
- Exchange ActiveSync

OneDrive

For more detailed information on the limitations of OneDrive, please refer to this Microsoft article, OneDrive Limits. These are some of the limitations that will be discussed in the OneDrive Limits article:

- File name and path lengths
- Thumbnails and previews
- Number of items to be synced
- Information rights management
- Differential sync
- Libraries with specific columns
- Windows specific limitations

SharePoint

For more detailed information on the limitations of SharePoint Online, please refer to this Microsoft article, SharePoint Online Limits. These are some of the limitations that will be discussed in the SharePoint Online article:

- Limits by plan

Feature	Office 365 Business Essentials or Business Premium	Office 365 Enterprise E1, E3, or E5, or SharePoint Online Plan 1 or 2	Office 365 Enterprise F1
Total storage per organization[1, 2]	1 TB plus 10 GB per license purchased	1 TB plus 10 GB per license purchased[3]	1 TB[3]
Max storage per site collection[4]	25 TB	25 TB	25 TB[5]
Site collections per organization	1 million[6]	1 million[6]	1 million
Number of users	Up to 300	1- 500,000[7]	1- 500,000[7]

- Service limits for all plans, such as: items in lists and libraries, file size and file path length, moving and copying across site collections, sync, versions, SharePoint groups, managed metadata, subsites, etc.

2.12 Best Practices and Recommendations

The following are some best practices or recommendations we strongly recommend you follow before you start any Office 365 backup and restore.

Temporary Directory Folder Location (For backup and restore running on AhsayOBM only)

Temporary directory folder is used by AhsayOBM for storing backup set index files and any incremental or differential backup files generated during a backup job. To ensure optimal backup/restoration performance, it is recommended that the temporary directory folder is set to a local drive with sufficient free disk space.

Performance Recommendations

Consider the following best practices for optimized performance of the backup operations:

- Enable schedule backup jobs when system activity is low to achieve the best possible performance.

- Perform test restores periodically to ensure your backup is set up and performed properly. Performing recovery test can also help identify potential issues or gaps in your recovery plan. It is important that you do not try to make the test easier, as the objective of a successful test is not to demonstrate that everything is flawless. There might be flaws identified in the plan throughout the test and it is important to identify those flaws.

Set Backup Destination

After creating the backup set-in Run-on Client mode on AhsayCBS user web console, please remember to login AhsayOBM to set the backup destination if you want the backup destination to be Local/ Mapped Drive/ Removable Drive.

Backup Destination

To provide maximum data protection and flexible restore options for agent-based backup, it is recommended to configure:

- At least one offsite or cloud destination
- At least one local destination for fast recovery

However, for Agentless Cloud storage there may be an impact on the backup performance.

Login AhsayOBM

After modifying the backup schedule setting or Continuous Backup setting of the **Run on Client** backup set on AhsayCBS user web console, please remember to login to the AhsayOBM client once to synchronize the changes immediately.